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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/702,691	11/01/2000	Seste Dell' Aera	679P01US	9894

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04/24/2003

EXAMINER

HARRY, ANDREW T

ART UNIT

PAPER NUMBER

2683

DATE MAILED: 04/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/702,691

Applicant(s)

DELL' AERA, SESTE

Examiner

Andrew T Harry

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 November 2000 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) g.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Objections

The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Misnumbered claims 11-15 have been renumbered 12-16.

Additionally it is suggested that the Applicant amend claims 12-16 to depend from claim 11 instead of claim 10. For the initial examination of this Application the Examiner assumed that claims 12-16 depended from claim 11 instead of claim 10.

Claim Rejections - 35 USC § 102

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1-15, and 16 are rejected under 35 U.S.C. 102(e) as being anticipated by *Ledfelt et al.* U.S. Patent 6,304,517 ("*Ledfelt*").

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As pertaining to **claims 1, 11, 13 and 16**, Ledfelt teaches a method and apparatus for calibrating a radio having a frequency source which produces a first signal having a first frequency by multiplying a second signal having an original frequency by a multiplier value (see *Ledfelt*, col. 7 line 3-col. 9 line 16), the method comprising:

a) a frequency measurement device for determining the original frequency, said frequency measurement device producing measurement data relating to the output frequency of the signal (see *Ledfelt*, col. 5 lines 11-67);

b) utilizing the original frequency source and a controller (processing unit/CPU) coupled to the frequency source to determine a corrected multiplier value and to control the value of the multiplier (see *Ledfelt*, col. 6 lines 7-57); and

c) producing an output signal having an output frequency approximately equal to a desired frequency by adjusting the multiplier value to the corrected multiplier value (see *Ledfelt*, col. 9 lines 28-45).

As pertaining to **claim 2**, in *Ledfelt* determining the original frequency further includes the steps of:

a1) measuring the first frequency (see *Ledfelt*, col. 5 lines 11-67); and

a2) dividing the first frequency by the multiplier value to obtain the original frequency (see *Ledfelt*, col. 7 line 3-col. 9 line 16).

As pertaining to **claim 3**, in *Ledfelt*, the step of utilizing the original frequency to determine a corrected multiplier value further includes the steps of dividing the desired frequency by the original frequency to obtain the corrected multiplier value (see *Ledfelt*, col. 7 line 3-col. 9 line 16).

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As pertaining to **claims 4 and 15**, in *Ledfelt's* method and apparatus the original frequency is stored in a storage means (see *Ledfelt*, col. 5 lines 45-55).

As pertaining to **claims 5 and 12**, in *Ledfelt's* method and apparatus the frequency source is a high resolution frequency synthesizer (see *Ledfelt*, col. 5 lines 11-17).

As pertaining to **claim 6**, in *Ledfelt's* method the second signal is provided by a crystal oscillating at the original frequency (see *Ledfelt*, col. 7 line 3-col. 9 line 16).

As pertaining to **claim 7**, *Ledfelt* describes a method of adjusting an output frequency of a signal produced by a frequency source, said frequency source producing the signal by multiplying an input signal having an original frequency by a multiplier value (see *Ledfelt*, col. 7 line 3-col. 9 line 16), the method comprising:

- aa) measuring a preliminary frequency of the signal (see *Ledfelt*, col. 5 lines 11-67);
- ab) adjusting the multiplier value based on a desired frequency and a measurement of the preliminary frequency to produce a corrected multiplier value (see *Ledfelt*, col. 7 line 3-col. 9 line 16).
- ac) outputting a signal having an intermediate frequency based on the corrected multiplier value (see *Ledfelt*, col. 9 lines 28-45).
- ad) repeating steps aa) to ac) above to obtain a final signal with a final frequency such that a difference between the final frequency and the desired frequency is a minimum (see *Ledfelt*, col. 5 line 10-col. 6 line 57, the method in *Ledfelt* is repeated for a number of iterations to obtain an accurate correction value).

As pertaining to **claim 8**, in *Ledfelt*, step ab) further includes:

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ab1) incrementing the multiplier value by a preprogrammed value to obtain the corrected multiplier value if the preliminary frequency is lesser than the desired frequency (see *Ledfelt*, col. 6 lines 7-57).

As pertaining to **claim 9**, *Ledfelt*'s method as described above further includes the step of obtaining the original frequency by dividing the final frequency by the corrected multiplier value (see *Ledfelt*, col. 7 line 3-col. 9 line 16).

As pertaining to **claim 10**, in *Ledfelt*'s method the original frequency is stored in a storage means (see *Ledfelt*, col. 5 lines 45-55).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Ledfelt*.

As pertaining to **claim 14**, *Ledfelt* is silent regarding the manner in which his frequency source, controller, and frequency measurement device are implemented. It would have been obvious to one of ordinary skill in the art at the time of the invention to implement all of the aforementioned functionalities on a single integrated circuit device. This would allow for the device disclosed by *Ledfelt* to be lighter and more compact for the user to operate. Furthermore the fact that the instant invention claims to have all of these functionalities on one chip would not

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result in the claimed invention being novel over the prior art made of record during the examination of this application.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

B. Suizu U.S. Patent 5,552,838 teaches an apparatus for tuning offset signals by controlling a tuner based on a difference in frequency of signals tuned by that tuner.

C. Gillig U.S. Patent 5,604,468 teaches a frequency synthesizer with temperature compensation and frequency multiplication and method of providing the same.

D. Mori U.S. patent 5,774,800 teaches a radio communication apparatus with reference frequency control based on stored characteristic control data.

E. Daughtry, Jr. et al. U.S. Patent 5,875,388 teaches a crystal oscillator with automatic compensation for aging and temperature.

F. Gillig et al. U.S. Patent 5,856,766 teaches a communication device with a frequency compensating synthesizer and method of providing same.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew T Harry whose telephone number is 703-305-4749. The examiner can normally be reached on M-F 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Trost can be reached on 703-308-5318. The fax phone numbers for the

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organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4700.

ATH
April 7, 2003


WILLIAM TROST
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600